

IN THE SPECIFICATION:

Please substitute the paragraph beginning on page 10, line 21, with the following paragraph:

β1 -- When the electrodes 24 and 26 of the catheter 20 are positioned at the treatment site of the incompetent venous section, an RF generator, electrically connected to the electrodes, is activated to provide suitable RF energy, preferably at a selected frequency from a range of 250 kHz to 350 MHz. One suitable frequency is 510 kHz. One criterion used in selecting the frequency of the energy to be applied is the control desired over the spread, including the depth, of the thermal effect in the venous tissue. Another criterion is compatibility with filter circuits for eliminating RF noise from thermocouple signals. --

Please substitute the paragraph beginning on page 18, line 3, with the following paragraph:

β2 -- The bowable electrodes 66 are connected to a slidable tube 70 and a fixed tip 72 at the working end 74, where moving the tube 70 controls the diameter of the electrode deployment for proper treatment of vein lumen having different diameters. The inner stop tube 78 is connected to the slidable tube 70 and acts as a stop device as the slidable tube 70 and inner stop tube 78 are slid over the inner shaft 83 by making contact with the stop surface 80 that is fixed in position with the tip. The inner stop tube 78 thus interacts with the stop surface 80 to limit the amount of deployment of the bowable electrodes 66. A fluid cover 82, shown here in cutaway form as a bellows, prevents fluids from entering the space between the inner shaft 83 and the inner stop

B²
tube 78 and is discussed in greater detail below. A guide wire 98 is seen protruding out the working end 74. --

Please substitute the paragraph beginning on page 20, line 20, with the following paragraph:

-- The entire length of the bowable longitudinal electrode is conductive, and insulation 90 may be provided over the majority of the electrode surface in order to prevent any unintended heating effects. Only a modest portion of the conductive surface 68 is exposed to act as the electrode. The exposed surface can be placed closer to the tip 72 so that when the bowable electrodes are moved away from the catheter, the exposed conductive surface of the electrodes will be near the tip 72 which can be positioned adjacent the commissures and leaflets of the vein.

B
The heating effect is greatest when the electrodes are close together since the electrical field density (power density) is greatest at this point. The ends of the electrodes are insulated from each other to prevent creating larger electrical field densities at the ends, especially as the effective diameter increases which would create even greater field disparities between the ends and the bowed midsection where the electrode gap is larger. The insulation 90 can be polyimide, paralyene, or another type of insulating film. Insulation 90 provided along the inner radius of the bowable electrodes away from the venous tissue further prevents heating the blood flowing in the vein and reduces the likelihood of coagulation. The remaining exposed area 68 of the electrode is preferably the area which contacts the venous tissue during apposition. The heating effect is then focused along that portion of the venous tissue and between the positive and negative

5 electrodes. Where the arm 66 has a rectangular shape, then the exposed area which functionally acts as the electrode would then occupy only one face of that wire. The insulation 90 surrounding the electrode can further cover the peripheral edges of the exposed face of the electrode to further isolate the blood flow from unintended heating effects. --

